

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P929893

Luminaire Tested: DFN2DS-4P3F0-040DS950-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P929893
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-4P3F0-040DS950-FLL
Description: 3 foot, 90deg - 4way Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

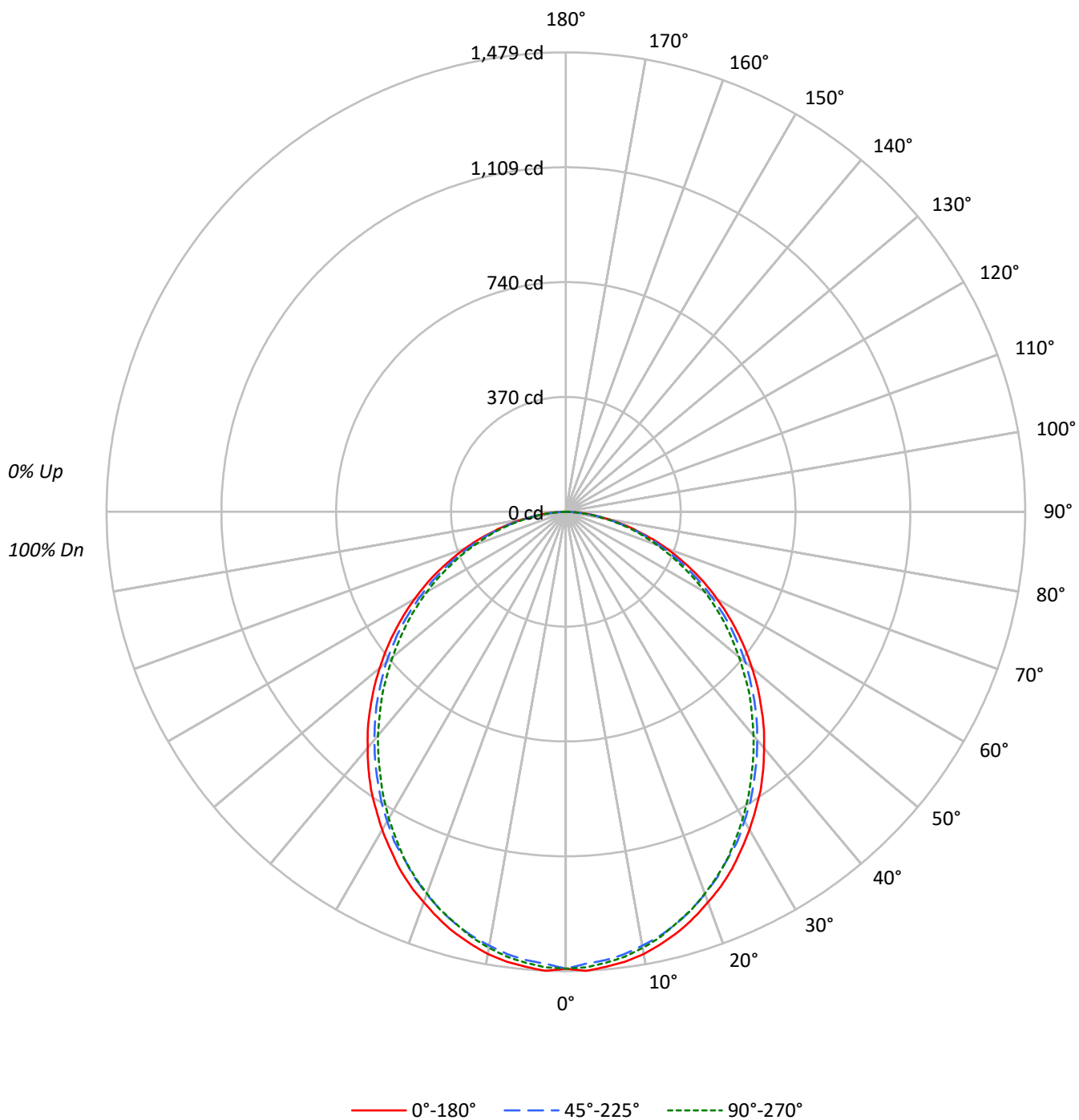
Lumens per Lamp: N/A
Luminaire Lumens: 3742.2 lumens
Efficiency: N/A
Efficacy: 92.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.07' x L: 3.07' x H: 0')
CIE Type: Direct

Input Watts (W): 40.6
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9789
Total Harmonic Distortion (THDi): 0.074
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P929893

CATALOG NUMBER: DFN2DS-4P3F0-040DS950-FLL

Luminous Intensity Polar Plot



TEST NUMBER: P929893

CATALOG NUMBER: DFN2DS-4P3F0-040DS950-FLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1676	1676	1676
5°	1683	1658	1668
10°	1673	1642	1650
15°	1652	1620	1619
20°	1622	1588	1587
25°	1593	1549	1549
30°	1556	1513	1500
35°	1521	1470	1448
40°	1477	1426	1399
45°	1434	1383	1349
50°	1387	1339	1291
55°	1338	1287	1239
60°	1283	1225	1180
65°	1224	1163	1110
70°	1150	1089	1037
75°	1046	1003	978
80°	929	900	854
85°	757	722	647

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1434 cd/sqm

TEST NUMBER: P929893

CATALOG NUMBER: DFN2DS-4P3F0-040DS950-FLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.4	3.7
10°-20°	389.5	10.4
20°-30°	572.4	15.3
30°-40°	664.8	17.8
40°-50°	664.0	17.7
50°-60°	579.0	15.5
60°-70°	428.0	11.4
70°-80°	242.2	6.5
80°-90°	63.9	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1100.3	29.4
0°-40°	1765.2	47.2
0°-60°	3008.1	80.4
0°-90°	3742.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3742.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1471	1471	1471	1471	1471	
5°	1471	1465	1450	1461	1458	140
15°	1400	1392	1373	1379	1372	394
25°	1267	1256	1232	1235	1232	583
35°	1093	1079	1056	1048	1041	683
45°	890	880	858	843	837	687
55°	673	665	648	631	624	602
65°	454	446	431	419	412	449
75°	238	235	228	219	222	254
85°	58	57	55	51	50	68
90°	0	0	0	0	0	

TEST NUMBER: P929893

CATALOG NUMBER: DFN2DS-4P3F0-040DS950-FLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1470.8	1470.8	1470.8	1470.8	1470.8
2.5°	1479.4	1472.3	1456.7	1470.8	1468.2
5°	1470.8	1465.2	1449.6	1460.9	1458.2
7.5°	1460.9	1452.5	1436.9	1448.3	1445.5
10°	1445.5	1435.5	1418.6	1429.9	1425.6
12.5°	1424.1	1415.7	1398.8	1405.9	1402.9
15°	1400.1	1391.7	1373.3	1378.9	1372.0
17.5°	1370.4	1362.0	1343.6	1350.6	1343.6
20°	1337.8	1329.4	1309.7	1313.8	1308.4
22.5°	1305.4	1292.7	1274.2	1274.2	1271.4
25°	1267.2	1255.9	1231.9	1234.6	1231.9
27.5°	1224.7	1214.8	1196.6	1192.3	1185.3
30°	1182.4	1171.0	1149.9	1145.6	1140.0
32.5°	1137.1	1128.7	1106.0	1097.5	1091.8
35°	1093.3	1079.2	1056.5	1048.0	1040.9
37.5°	1043.8	1031.0	1008.3	998.5	991.4
40°	992.9	981.5	958.8	946.2	940.6
42.5°	943.4	932.0	909.5	895.2	886.8
45°	889.6	879.8	858.4	843.0	837.3
47.5°	837.3	827.3	804.8	789.2	780.8
50°	782.1	775.0	755.2	735.4	728.3
52.5°	728.3	718.5	700.2	684.6	674.6
55°	673.3	664.7	647.8	630.8	623.8
57.5°	618.0	611.0	592.5	575.6	569.9
60°	562.8	557.3	537.5	521.9	517.7
62.5°	509.2	499.2	485.2	471.0	465.3
65°	454.1	445.5	431.4	418.6	411.6
67.5°	397.5	390.3	377.7	367.8	362.1
70°	345.1	339.4	326.7	316.8	311.2
72.5°	291.4	285.7	278.7	268.8	264.5
75°	237.6	234.8	227.7	219.2	222.1
77.5°	189.5	183.8	181.0	176.7	172.6
80°	141.5	140.0	137.1	133.0	130.1
82.5°	96.2	96.2	94.9	89.1	89.1
85°	57.9	56.6	55.2	50.8	49.5
87.5°	25.5	22.7	19.8	15.6	14.1
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P929893

CATALOG NUMBER: DFN2DS-4P3F0-040DS950-FLL

CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	13.08	14.69	13.44	15.00	15.32	12.63	14.24	13.00	14.56	14.87
	3H	14.83	16.28	15.20	16.61	16.97	14.34	15.79	14.71	16.12	16.48
	4H	15.47	16.84	15.87	17.19	17.57	14.98	16.35	15.38	16.70	17.07
	6H	15.94	17.21	16.35	17.58	17.97	15.44	16.71	15.85	17.07	17.47
	8H	16.09	17.30	16.51	17.69	18.08	15.58	16.79	16.01	17.18	17.58
	12H	16.18	17.34	16.61	17.72	18.15	15.66	16.82	16.09	17.21	17.63
4H	2H	13.64	15.01	14.04	15.35	15.73	13.28	14.65	13.68	15.00	15.38
	3H	15.61	16.76	16.02	17.16	17.56	15.21	16.35	15.62	16.75	17.15
	4H	16.39	17.42	16.82	17.84	18.27	15.97	17.00	16.40	17.41	17.85
	6H	16.99	17.89	17.44	18.33	18.79	16.55	17.46	17.01	17.90	18.36
	8H	17.17	18.02	17.64	18.46	18.93	16.74	17.58	17.20	18.03	18.49
	12H	17.31	18.07	17.79	18.54	19.01	16.85	17.61	17.33	18.09	18.56
8H	4H	16.66	17.51	17.12	17.95	18.42	16.29	17.13	16.75	17.58	18.04
	6H	17.38	18.08	17.87	18.57	19.04	17.00	17.70	17.49	18.19	18.66
	8H	17.64	18.27	18.15	18.77	19.26	17.24	17.88	17.75	18.38	18.87
	12H	17.84	18.39	18.34	18.88	19.45	17.42	17.98	17.93	18.47	19.03
12H	4H	16.69	17.45	17.17	17.92	18.39	16.32	17.08	16.80	17.56	18.03
	6H	17.42	18.05	17.93	18.56	19.05	17.05	17.69	17.56	18.19	18.68
	8H	17.74	18.29	18.24	18.78	19.35	17.36	17.92	17.87	18.41	18.97